

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

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| In re Patent Application of: |) | MAIL STOP APPEAL BRIEF - PATENTS |
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| Changming LIU et al. |) | Group Art Unit: 2143 |
| |) | |
| Application No.: 09/658,424 |) | Examiner: D. England |
| |) | |
| Filed: September 8, 2000 |) | |
| |) | |
| For: GUARANTEED BANDWIDTH) |) | |
| SHARING IN A TRAFFIC) |) | |
| SHAPING SYSTEM) |) | |

RESPONSE TO NOTIFICATION OF NON-COMPLIANT APPEAL BRIEF

U.S. Patent and Trademark Office
Customer Window, Mail Stop Appeal Brief - Patents
Randolph Building
401 Dulany Street
Alexandria, Virginia 22314

Sir:

This paper is submitted in response to the Notification of Non-Compliant Appeal Brief mailed August 24, 2007 and in support of the Notice of Appeal filed March 9, 2007 and the Appeal Brief filed May 9, 2007.

Remarks begin on page 2 of this paper.

REMARKS

The Notice of Non-Compliant Appeal Brief dated August 24, 2007 states that the Appeal Brief does not contain a concise explanation of the subject matter defined in each of the independent claims involved in the appeal. More particularly, the Notice of Non-Compliant Appeal Brief states that “all that is stated are the claims and the corresponding reference areas of the enabling specification and drawings.”

The Appellants respectfully disagree with the Examiner’s interpretation of the requirements of 37 C.F.R. § 41.37. More particularly, 37 C.F.R. § 41.37 and MPEP § 1205.02 require the Appellants to refer to the claimed features by page and line number to enable the Board to more quickly determine where the claimed subject matter is described in the application. Therefore, the Appellants assert that the originally filed Summary of Claimed Subject Matter section (Section V) meets the requirements of 37 C.F.R. § 41.37 by referring to the claimed features and providing the required information identifying where the claimed subject matter is described in the application. However, the Appellants hereby submit below a replacement section V that provides a more concise explanation of the claimed subject matter in accordance with the Examiner’s request.

V. **SUMMARY OF CLAIMED SUBJECT MATTER**

In the paragraphs that follow, a concise explanation of the independent claims, each dependent claim argued separately, and the claims reciting means-plus-function or

step-plus-function language that are involved in this appeal will be provided by referring, in parenthesis, to examples of where support can be found in the specification and drawings.

Claim 1 relates to a method for allocating bandwidth to and from a shared bandwidth bucket to a plurality of guaranteed bandwidth buckets depending on the traffic needs of the network appliance. More particularly, claim 1 recites a method for allocating bandwidth in a network appliance where the network appliance includes a plurality of guaranteed bandwidth buckets used to evaluate when to pass traffic through the network appliance (e.g., 100, Fig. 1; pg. 5, lines 13-17; pg. 6, lines 1-3). More particularly, the method includes providing a shared bandwidth bucket associated with each of the plurality of the guaranteed bandwidth buckets (e.g., 130c, 130b, Fig. 1; pg. 6, lines 10-30 to pg. 7, lines 1-3); allocating bandwidth to the shared bandwidth bucket based on the underutilization of bandwidth in any one of the plurality of guaranteed bandwidth buckets (e.g., pg. 7, lines 3-7); determining whether bandwidth in one of the plurality of guaranteed bandwidth buckets is sufficient to allow traffic to pass immediately through the network appliance (e.g., pg. 7, lines 10-12); and transferring bandwidth from the shared bandwidth bucket to one of the plurality of guaranteed bandwidth buckets when it is determined that bandwidth in one of the plurality of guaranteed bandwidth buckets is not sufficient to allow traffic to pass immediately through the network appliance (e.g., pg. 7, lines 14-16).

Claim 14 relates to a method for allocating bandwidth to and from a shared bandwidth bucket to a first and second guaranteed bandwidth buckets based on defined

policies associated with the first and second guaranteed bandwidth buckets. More particularly, claim 14 recites a method for allocating bandwidth in a network appliance including defining a guaranteed bandwidth allocation for a first policy for passing traffic through the network appliance (e.g., 100, Fig. 1; pg. 5, lines 13-17; pg. 6, lines 1-3) including using a first bucket to allocate the guaranteed bandwidth (e.g., 130a, Fig. 1; pg. 6, lines 10-15); defining a guaranteed bandwidth allocation for a second policy for passing traffic through the network appliance including using a second bucket to allocate the guaranteed bandwidth (e.g., 130b, Fig. 1; pg. 6, lines 21-30); sharing excess bandwidth developed from the underutilization of the guaranteed bandwidth allocated to the first and second buckets including providing a shared bandwidth bucket associated with the first and second buckets (e.g., 130c, Fig. 1; pg. 7, lines 1-7); and borrowing bandwidth from the shared bandwidth bucket by one of the first and second buckets when the respective bucket has insufficient bandwidth to allow traffic to pass immediately through the network appliance (e.g., pg. 7, lines 10-16).

Claim 15 relates to an apparatus for allocating bandwidth to and from a shared bandwidth bucket to a plurality of guaranteed bandwidth buckets depending on the traffic needs of the network appliance. More particularly, claim 15 recites an apparatus for allocating bandwidth in a network appliance (e.g., 100, Fig. 1; pg. 5, lines 13-17; pg. 6, lines 1-3) where the network appliance includes a plurality of guaranteed bandwidth buckets used to evaluate when to pass traffic through the network appliance (e.g., 130b, Fig. 1; pg. 6, lines 21-30), the apparatus includes a shared bandwidth bucket (e.g., 130c, Fig. 1; pg. 7, lines 1-7) associated with a plurality of the guaranteed bandwidth buckets;

means for allocating bandwidth to the shared bandwidth bucket based on the underutilization of bandwidth in the plurality of guaranteed bandwidth buckets (e.g., pg. 7, lines 10-16); and a scheduler (e.g., 108, Fig. 1; pg. 5, lines 20-24) operable to evaluate a packet to determine if a traffic shaping policy should be applied to a given packet (e.g., 206, Fig. 2; pg. 7, lines 25-26), evaluate a guaranteed bandwidth bucket associated with an identified traffic shaping policy (e.g., 210, Fig. 2; pg. 8, lines 5-10), determine when the guaranteed bandwidth bucket associated with an identified traffic shaping policy has insufficient capacity to support a transfer of the packet through the network (e.g., 210, Fig. 2; pg. 8, lines 5-10), and borrow bandwidth from the shared bandwidth bucket by a respective guaranteed bandwidth bucket to allow traffic to pass immediately through the network appliance (e.g., 214, Fig. 2; pg. 8, lines 15-18).

Claim 16 relates to a network device that includes a scheduler for allocating tokens to and from a third bucket to first and second buckets that receive tokens at first and second information rates, respectively, depending on the traffic needs of the network appliance. More particularly, claim 16 recites a network device (e.g., 100, Fig. 1; pg. 5, lines 13-17; pg. 6, lines 1-3) including a first bucket configured to receive tokens at a first information rate (e.g., 130a, Fig. 1; pg. 6, lines 10-15); a second bucket configured to receive tokens at a second information rate (e.g., 130b, Fig. 1; pg. 6, lines 21-30); a third bucket configured to receive extra tokens from the second bucket (e.g., 130c, Fig. 1; pg. 7, lines 1-7); and a scheduler (e.g., 108, Fig. 1; pg. 5, lines 20-24) configured to: determine if a size of traffic received at the network device exceeds a number of tokens stored in the first bucket (e.g., 208, Fig. 2; pg. 8, lines 3-7), determine, when the size of

the traffic does not exceed the number of tokens stored in the first bucket, if a size of the traffic exceeds a number of tokens stored in the second bucket (e.g., 210, Fig. 2; pg. 8, lines 5-10), and transfer, when the size of the traffic exceeds the number of tokens stored in the second bucket, an appropriate number of tokens from the third bucket to the second bucket so that the second bucket includes a number of tokens that equals or exceeds the size of the traffic (e.g., 214, Fig. 2; pg. 8, lines 15-18).

Claim 20 relates to a method for allocating tokens to and from a third bucket to first and second buckets that receive tokens at first and second information rates, respectively, depending on the traffic needs of the network appliance. More particularly, claim 20 recites a method including receiving traffic; determining if a policy is to be applied to the traffic (e.g., 206, Fig. 2; pg. 7, lines 25-26); determining, when a policy is to be applied to the traffic, if a size of the traffic exceeds a number of tokens in a first bucket, the first bucket being associated with the policy (e.g., 208, Fig. 2; pg. 8, lines 3-7); determining, when the size of the traffic does not exceed the number of tokens in the first bucket, if the size of the traffic exceeds the number of tokens in a second bucket (e.g., 210, Fig. 2; pg. 8, lines 5-10); determining, when the size of the traffic exceeds the number of tokens in the second bucket, if a third bucket includes an appropriate number of tokens that, when added to the number of tokens in the second bucket, would equal or exceed the size of the traffic (e.g., 212, Fig. 2; pg. 8, lines 11-13); transferring the appropriate number of tokens from the third bucket to the second bucket when the third bucket includes the appropriate number of tokens; and forwarding the traffic after the transferring (e.g., 214, Fig. 2; pg. 8, lines 15-18).

CONCLUSION

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 50-1070 and please credit any excess fees to such deposit account.

Respectfully submitted,

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